IN THE CLAIMS:

1   1-19. (CANCELLED)

1   20. (ORIGINAL) A computer readable medium containing executable program instruc-

2   tions for use by an intermediate network device having a plurality of ports for receiving

3   and forwarding network messages, the executable program instructions comprising pro-

4   gram instructions for:

5   configuring one or more ports as access ports;

6   configuring one or more access ports as rapid forwarding ports;

7   identifying all ports that have been configured as access ports with rapid forward-

8   ing; and

9   upon initialization of the device, placing each identified access port with rapid

10   forwarding directly to a forwarding spanning tree port state, without transitioning such

11   identified ports between any intermediary spanning tree port states, so that network mes-

12   sages may be received and forwarded by such identified ports immediately.

1   21. (ORIGINAL) The computer readable medium of claim 20 comprising further pro-

2   gram instructions for:

3   monitoring each of the one or more access ports configured with rapid forwarding

4   for receipt of a configuration bridge protocol data unit (BPDU) message; and

5   in response to receiving a BPDU message at one of the access ports configured

6   with rapid forwarding, placing the respective access port in a blocking spanning tree port

7   state.

1 22. (ORIGINAL) The computer readable medium of claim 21 wherein

2 the intermediate network device has a memory, and

3 the configuration of ports as access ports with rapid forwarding is stored at the

4 memory.

1 23. (ORIGINAL) The computer readable medium of claim 21 comprising further pro-

2 gram instructions for placing one or more other ports in a listening spanning tree port

3 state, upon initialization of the device.

1 24. (ORIGINAL) The computer readable medium of claim 20 wherein each access port

2 configured with rapid forwarding is placed in the forwarding state prior to a link-up sig-

3 nal being received at the respective port.

1 25. (ORIGINAL) The computer readable medium of claim 20 comprising further pro-

2 gram instructions for generating and issuing one or more configuration bridge protocol

3 data unit (BPDU) messages from each access port configured as rapid forwarding.

1 26. (ORIGINAL) The computer readable medium of claim 20 wherein an end station is

2 not coupled to a selected one of the access ports configured with rapid forwarding until

3 after the respective access port is placed in the forwarding spanning tree port state.

1 27. (ORIGINAL) The computer readable medium of claim 26 comprising further pro-

2 gram instructions for generating and issuing one or more configuration bridge protocol

3 data unit (BPDU) messages from each access port configured as rapid forwarding.

1 28. (PREVIOUSLY PRESENTED) A method comprising:

2 configuring one or more ports of a network device as access ports;

3 configuring one or more access ports to have a rapid forwarding designation;

4 identifying the ports that have been configured as access ports with rapid forward-

5 ing designation; and

6 upon initialization of the network device, placing each identified access port with

7 rapid forwarding designation directly into a forwarding spanning tree port state, without

8 transitioning such identified ports between any intermediary spanning tree port states, to

9 enable network messages to be received and forwarded by such identified ports immedi-

10 ately.

1 29. (PREVIOUSLY PRESENTED) The method of claim 28 further comprising:

2 monitoring each of the one or more access ports configured with rapid forwarding

3 port designation for receipt of a configuration bridge protocol data unit (BPDU) message;

4 and

5 in response to receiving a BPDU message at one of the access ports configured

6 with rapid forwarding designation, placing the respective access port in a blocking span-

7 ning tree port state.

1 30. (PREVIOUSLY PRESENTED) The method of claim 28, wherein the step of config-

2 uring one or more access ports further comprises:

3 selecting with a management protocol, by a network administrator, the one or

4 more access ports to have rapid forwarding designation.

1 31. (PREVIOUSLY PRESENTED) The method of claim 28 further comprising:

2 transitioning one or more other access ports that do not have rapid forwarding

3   designation to a listening spanning tree port state, upon initialization of the device.

1   32. (PREVIOUSLY PRESENTED) The method of claim 28, wherein each access port

2   configured with rapid forwarding designation is placed in the forwarding state prior to a

3   link-up signal being received at the respective port.

1   33. (PREVIOUSLY PRESENTED) The method of claim 28 further comprising:

2   issuing one or more configuration bridge protocol data unit (BPDU) messages

3   from each access port configured to have rapid forwarding designation.

1   34. (PREVIOUSLY PRESENTED) An apparatus comprising:

2   a port configuration entity operable to maintain configuration data that indicates

3   one or more ports of the apparatus are access ports, and that one or more of the access

4   ports have a rapid forwarding designation;

5   an enhanced spanning tree entity operable to query the port configuration entity

6   and to identify the ports that have been configured as access ports with rapid forwarding

7   designation; and

8   a state machine engine operable to place each identified access port with rapid

9   forwarding designation directly into a forwarding spanning tree port state, without transi-

10   tion of such identified ports between any intermediary spanning tree port states, to enable

11   network messages to be received and forwarded by such identified ports immediately.

1   35. (PREVIOUSLY PRESENTED) The apparatus of claim 34 wherein the enhanced

2   spanning tree entity is further operable to monitor each of the one or more access ports

3   configured with rapid forwarding port designation for receipt of a configuration bridge

4   protocol data unit (BPDU) message, and in response to receiving a BPDU message at one

5   of the access ports configured with rapid forwarding designation, to place the respective

6   access port in a blocking spanning tree port state.

1   36. (PREVIOUSLY PRESENTED) The apparatus of claim 34 further comprising:

2   a management protocol operable to permit a network administrator to select the

3   one or more access ports to have rapid forwarding designation.

1   37. (PREVIOUSLY PRESENTED) The apparatus of claim 34 wherein the state machine

2   engine is further operable to transition one or more other access ports that do not have

3   rapid forwarding designation to a listening spanning tree port state, upon initialization of

4   the device.

1   38. (PREVIOUSLY PRESENTED) The apparatus of claim 34 wherein the state machine

2   engine is operable to place each identified access port with rapid forwarding designation

3   into the forwarding spanning tree port state prior to a link-up signal being received at the

4   respective port.

1   39. (PREVIOUSLY PRESENTED) The apparatus of claim 34 wherein the state machine

2   engine is operable to place each identified access port with rapid forwarding designation

3   into the forwarding spanning tree port state while the respective port is uncoupled from

4   any end station.

1   40. (PREVIOUSLY PRESENTED) An apparatus comprising:

2   means for configuring one or more ports of a network device as access ports;

3   means for configuring one or more access ports to have a rapid forwarding desig-

4   nation;

5   means for identifying the ports that have been configured as access ports with

6   rapid forwarding designation; and

7   means for placing each identified access port with rapid forwarding designation

8   directly into a forwarding spanning tree port state upon initialization of the device, with-

9   out transitioning such identified ports between any intermediary spanning tree port states,

10   to enable network messages to be received and forwarded by such identified ports imme-

11   diately.

1   41. (PREVIOUSLY PRESENTED) The method of claim 28, wherein an end station is

2   not coupled to a selected one of the access ports configured with rapid forwarding desig-

3   nation until after the respective access port is placed in the forwarding spanning tree port

4   state.

1   42. (NEW) An apparatus comprising:

2   a port configuration entity operable to maintain configuration data that indicates

3   one or more ports have been configured with a management protocol to have a rapid for-

4   warding designation;

5   an enhanced spanning tree entity operable to query the port configuration entity

6   and to identify the ports that have been configured with rapid forwarding designation;

7   and

8   a state machine engine operable to place each identified port with rapid forward-

9   ing designation directly into a forwarding spanning tree port state, without transition of

10   such identified ports between any intermediary spanning tree port states.

1   43. (NEW) The apparatus of claim 42 wherein the state machine engine is operable to

2   place each identified port with rapid forwarding designation into the forwarding spanning

3   tree port state prior to a link-up signal being received at the port.